

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Shuguang Zhang, Alexander Rich, Lin Yan, and George Whitesides

Continuation Application

Application No.: 08/882,415

Filed: June 25, 1997

For: Self-Assembling Peptide Surfaces for Cell Patterning and Interactions

JC996 U.S. PTO
10/071500
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AKO
8-11-02

Date: <u>2/8/02</u>
EXPRESS MAIL LABEL NO. <u>EV052028106</u>

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

This Information Disclosure Statement is submitted:

- ☐ under 37 CFR 1.129(a), or
(First/Second submission after Final Rejection)
- ☒ under 37 CFR 1.97(b), or
(Within any one of the following time periods: three months of filing national application (other than a CPA) or date of entry of the national stage in an international application; or before the mailing date of a first office action on the merits in a non-provisional application, including a CPA, or a Request for Continued Examination).
- ☐ under 37 CFR 1.97(c) together with either:
- ☐ a Statement under 37 CFR 1.97(e), as checked below, or
- ☐ a \$180.00 fee under 37 CFR 1.17(p), or
(After the 37 CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)
- ☐ under 37 CFR 1.97(d) together with:
- ☐ a Statement under 37 CFR 1.97(e), as checked below, and
- ☐ a \$180.00 fee under 37 CFR 1.17(p), or
(Filed after final action or notice of allowance, whichever occurs first, but on or before payment of the issue fee)
- ☐ under 37 CFR 1.97(i):
Applicant requests that the IDS and cited reference(s) be placed in the application filewrapper.
(Filed after payment of issue fee)

Statement Under 37 CFR 1.97(e)

- ☐ Each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement; or
- ☐ No item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

Statement Under 37 CFR 1.704(d) (Patent Term Adjustment)

Applies to original applications (other than design) filed on or after May 29, 2000

- ☐ Each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.
- ☒ Enclosed herewith is form PTO-1449:
- ☐ Copies of the cited references are enclosed.
- ☒ Copies of cited references are enclosed except those entered in prior application, U.S. Application No. 08/882,415, to which priority under 35 U.S.C. 120 is claimed. [The earlier application contains copies of the cited references.]
- ☐ The listed references were cited in the enclosed International Search Report in a counterpart foreign application.
- ☐ The "concise explanation" requirement (non-English references) for reference(s) [] under 37 CFR 1.98(a)(3) is satisfied by:
- ☐ the explanation provided on the attached sheet.
 - ☐ the explanation provided in the Specification.
 - ☐ submission of the enclosed International Search Report.
 - ☐ submission of the enclosed English-language version of a foreign Search Report and/or foreign Office Action.
 - ☐ the enclosed English language abstract.

[X] Applicant requests that the following non-published pending applications be considered:

Examiner's
Initials

____ U.S. Patent Application No. 08/882,415, by Shuguang Zhang, Alexander Rich, Lin Yan,
George Whitesides, filed June 25, 1997, Docket No.: 0050.1587-000.

____ U.S. Patent Application No. [], by [inventor(s)], filed [], Docket No.: []

____ U.S. Patent Application No. [], by [inventor(s)], filed [], Docket No.: []

Examiner

Date

[] A copy of each above-cited application, including the current claims, is enclosed.

[X] A copy of each above-cited application, including the current claims, is enclosed, except those entered in prior application, U.S. Application No. 08/882,415, to which priority under 35 U.S.C. 120 is claimed.

The Examiner is requested to return a copy of the above list of pending applications indicating which references were considered with the next office communication.

It is requested that the information disclosed herein be made of record in this application.

Method of payment:

[] A check for the fee noted above is enclosed, or the fee has been included in the check with the accompanying Reply. A copy of this Statement is enclosed.

[] Please charge Deposit Account 08-0380 in the amount of \$[]. A copy of this Statement is enclosed.

[X] Please charge any deficiency in fees and credit any overpayment to Deposit Account 08-0380.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

By



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Dated:

February 9, 2002

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INFORMATION DISCLOSURE CITATION
IN AN APPLICATION

February 8, 2002

(Use several sheets if necessary)

ATTORNEY DOCKET NO.
0050.1587-003

Continuation of
APPLICATION NO.
08/882,415

APPLICANT
Shuguang Zhang, et al.

FILING DATE

GROUP

JC996 U.S. PTO
10/071500
02/08/02

U.S. PATENT DOCUMENTS

EXAM- INER INI- TIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
	AA	5,330,911	7/19/94	Hubbell, et al.	435	240.243	
	AB	5,512,131	4/30/96	Kumar, et al.	156	655.1	
	AC	5,541,070	7/30/96	Kauvar	435	7.9	
	AD	5,620,850	4/15/97	Bamdad, et al.	530	300	
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO
	AL	97/07429	27-FEB-1997	WO			
	AM	96/29629	26-SEP-1996	WO			
	AN						
	AO						
	AP						
	AQ						

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	AR	Lopez, et al., "Convenient Methods for Patterning the Adhesion of Mammalian Cells to Surfaces Using Self-Assembled Monolayers of Alkanethiolates on Gold," <i>J Am Chem Soc</i> , 115(13):5877-5878 (1993).
	AS	Mrksich and Whitesides, "Using Self-Assembled Monolayers to Understand the Interactions of Man-Made Surfaces with Proteins and Cells," <i>Annu Rev Biophys Biomol Struct</i> , 25:55-78 (1996).
	AT	Xia, et al., "Microcontact Printing of Octadecylsiloxane on the Surface of Silicon Dioxide and Its Application in Microfabrication," <i>J Am Chem Soc</i> , 117:9576-9577 (1995).

EXAMINER

DATE CONSIDERED

PTO-1449 REPRODUCED		ATTORNEY DOCKET NO. 0050.1587-003	Continuation of APPLICATION NO. 08/882,415
INFORMATION DISCLOSURE CITATION IN AN APPLICATION February 8, 2002 (Use several sheets if necessary)		APPLICANT Shuguang Zhang, et al.	
		FILING DATE	GROUP
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
	AU	Deng, L., et al., "Self-Assembled Monolayers of Alkanethiolates Presenting Tri(propylene sulfoxide) Groups Resist the Adsorption of Protein," <i>J Am Chem Soc</i> , 118(21):5136-5137 (1996).	
	AV	Chen, C.S., et al., "Geometric Control of Cell Life and Death," <i>Science</i> , 276:1425-1428 (1997).	
	AW	Kumar, A., et al., "Patterned Self-Assembled Monolayers and Meso-Scale Phenomena," <i>Acc Chem Res</i> , 28(5):219-226 (1995).	
	AX	DiMilla, P.A., et al., "Wetting and Protein Adsorption of Self-Assembled Monolayers of Alkanethiolates Supported on Transparent Films of Gold," <i>J Am Chem Soc</i> , 116(5):2225-2226 (1994).	
	AY	Singhvi, R., et al., "Engineering Cell Shape and Function," <i>Science</i> , 264:696-698 (1994).	
	AZ	Wilbur, J.L., et al., "Microfabrication by Microcontact Printing of Self-Assembled Monolayers," <i>Adv Mater</i> , 6(7/8):600-604 (1994).	
	AR2	Xia, Y., et al., "Microcontact Printing of Alkanethiols on Copper and Its Application in Microfabrication," <i>Chem Mater</i> , 8(3):601-603 (1996).	
	AS2	Mrksich, M., et al., "Biospecific Adsorption of Carbonic Anhydrase to Self-Assembled Monolayers of Alkanethiolates That Present Benzenesulfonamide Groups on Gold," <i>J Am chem Soc</i> , 117(48):12009-12010 (1995).	
	AT2	Jeon, N.L., et al., "Patterned Self-Assembled Monolayers Formed by Microcontact Printing Direct Selective Metalization by Chemical Vapor Deposition on Planar and Nonplanar Substrates," <i>Langmuir</i> , 11(8):3024-3026 (1995).	
	AU2	Pale-Grosdemange, C., et al., "Formation of Self-Assembled Monolayers by Chemisorption of Derivatives of Oligo(ethylene glycol) of Structure HS(CH ₂) ₁₁ (OCH ₂ CH ₂) _m OH on Gold," <i>J Am Chem Soc</i> , 113(1):12-20 (1991).	
	AV2	Prime, K.L. and Whitesides, G.M., "Self-Assembled Organic Monolayers: Model Systems for Studying Adsorption of Proteins at Surfaces," <i>Science</i> , 252:1164-1167 (1991).	
	AW2	Prime, K.L. and Whitesides, G.M., "Adsorption of Proteins onto Surfaces Containing End-Attached Oligo(ethylene oxide): A Model System Using Self-Assembled Monolayers," <i>J Am Chem Soc</i> , 115(23):10714-10721 (1993).	
	AX2	Lopez, G. P., et al., "Fabrication and Imaging of Two-Dimensional Patterns of Proteins Adsorbed on Self-Assembled Monolayers by Scanning Electron Microscopy," <i>J Am Chem Soc</i> , 115(23):10774-10781 (1993).	
	AY2	Sigal, G.B., et al., "A Self-Assembled Monolayer for the Binding and Study of Histidine-Tagged Proteins by Surface Plasmon Resonance," <i>Anal Chem</i> , 68:490-497 (1996).	
EXAMINER		DATE CONSIDERED	

PTO-1449 REPRODUCED		ATTORNEY DOCKET NO. 0050.1587-003	Continuation of APPLICATION NO. 08/882,415
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		FILING DATE	GROUP
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
	AZ2	Whitesides, G.M., "Self-Assembling Materials," <i>Scientific American</i> , 273:146-149 (1995).	
	AR3	Mrksich, M., et al., "Controlling Cell Attachment on Contoured Surfaces with Self-Assembled Monolayers of Alkanethiolates on Gold," <i>Proc Natl Acad Sci USA</i> , 93:10775-10778 (1996).	
	AS3	You, A.J., et al., A Miniaturized Arrayed Assay Format for Detecting Small Molecule-Protein Interactions in Cells," <i>Chem Biol</i> , 4(12):969-975 (1997).	
	AT3	Duschl, C., et al., "Biologically Addressable Monolayer Structures Formed by Templates of Sulfur-Bearing Molecules," <i>Biophysical Journal</i> , 67(3):1229-1237 (September 1994).	
	AU3	Knichel, M., et al., "Utilization of a Self-Assembled Peptide Monolayer for an Impedimetric Immunosensor," <i>Sensors and Actuators B B28</i> , (2):85-94 (August 1995).	
	AV3	Keller, T.A., et al., "Reversible Oriented Immobilization of Histidine-Tagged Proteins on Gold Surfaces Using a Chelator Thioalkane," <i>Supramolecular Science</i> , 2:155-160 (1995).	
	AW3	Zhang, et al., "Biological Surface Engineering: A Simple System for Cell Pattern Formation," <i>Biomaterials</i> , 20:1213-1220 (1999).	
	AX3	Lea, et al., "Manipulation of Proteins on Mica by Atomic Force Microscopy," <i>Langmuir</i> , 8:68-73 (January 1992).	
	AY3	Chaikof, et al., "Self-Assembling Peptide Monolayers: Endothelial Cell Behavior on Functionalized Metal Substrates," <i>Mat Res Soc Symp Proc</i> , 414:17-22 (1996).	
EXAMINER		DATE CONSIDERED	